



TEP Rocky Mountain LLC

Garfield County, CO NAD83

PA 22-25 Pad

PA 342-26 - Slot PA 342-26 (B3)

OH

Plan: Plan #1

Standard Planning Report

03 June, 2017



Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 342-26 - Slot PA 342-26 (B3)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 342-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	PA 22-25 Pad			
Site Position:		Northing:	1,615,186.77 usft	Latitude: 39.4968742
From: Map		Easting:	2,308,728.18 usft	Longitude: -107.9499045
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.55 °

Well	PA 342-26 - Slot PA 342-26 (B3), B3			
Well Position	+N/-S	13.44 usft	Northing:	1,615,199.67 usft
	+E/-W	19.49 usft	Easting:	2,308,748.03 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	5,224.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/22/2017	9.45	65.82	51,744

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	283.66

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	4.00	330.00	399.84	6.04	-3.49	2.00	2.00	0.00	330.00	
450.00	4.00	330.00	449.72	9.06	-5.23	0.00	0.00	0.00	0.00	
1,168.48	24.09	282.93	1,144.24	64.23	-162.54	3.00	2.80	-6.55	-54.44	
4,963.65	24.09	282.93	4,608.85	410.88	-1,672.39	0.00	0.00	0.00	0.00	
6,569.71	0.00	0.00	6,168.00	485.33	-1,996.65	1.50	-1.50	0.00	180.00	
8,369.71	0.00	0.00	7,968.00	485.33	-1,996.65	0.00	0.00	0.00	0.00	PBHL (PA 342-26)

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Project:	Garfield County, CO NAD83	MD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 342-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (PA 342-26)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2.00	330.00	299.98	1.51	-0.87	1.20	2.00	2.00	0.00
400.00	4.00	330.00	399.84	6.04	-3.49	4.82	2.00	2.00	0.00
450.00	4.00	330.00	449.72	9.06	-5.23	7.23	0.00	0.00	0.00
500.00	5.02	315.92	499.56	12.15	-7.63	10.28	3.00	2.05	-28.15
600.00	7.56	300.98	598.96	18.68	-16.32	20.27	3.00	2.54	-14.94
700.00	10.35	293.76	697.73	25.69	-30.18	35.39	3.00	2.79	-7.22
800.00	13.23	289.62	795.61	33.15	-49.18	55.62	3.00	2.88	-4.14
900.00	16.15	286.95	892.34	41.05	-73.27	80.89	3.00	2.92	-2.67
1,000.00	19.10	285.08	987.63	49.36	-102.37	111.14	3.00	2.95	-1.87
1,100.00	22.06	283.69	1,081.24	58.06	-136.42	146.28	3.00	2.96	-1.39
9 5/8" @ 1100' MD									
1,168.48	24.09	282.93	1,144.24	64.23	-162.54	173.11	3.00	2.97	-1.11
1,200.00	24.09	282.93	1,173.02	67.11	-175.08	185.98	0.00	0.00	0.00
1,300.00	24.09	282.93	1,264.31	76.24	-214.86	226.79	0.00	0.00	0.00
1,400.00	24.09	282.93	1,355.60	85.38	-254.65	267.61	0.00	0.00	0.00
1,500.00	24.09	282.93	1,446.89	94.51	-294.43	308.42	0.00	0.00	0.00
1,600.00	24.09	282.93	1,538.18	103.65	-334.21	349.24	0.00	0.00	0.00
1,700.00	24.09	282.93	1,629.47	112.78	-374.00	390.05	0.00	0.00	0.00
1,800.00	24.09	282.93	1,720.75	121.91	-413.78	430.87	0.00	0.00	0.00
1,900.00	24.09	282.93	1,812.04	131.05	-453.56	471.68	0.00	0.00	0.00
2,000.00	24.09	282.93	1,903.33	140.18	-493.35	512.50	0.00	0.00	0.00
2,100.00	24.09	282.93	1,994.62	149.32	-533.13	553.31	0.00	0.00	0.00
2,200.00	24.09	282.93	2,085.91	158.45	-572.91	594.13	0.00	0.00	0.00
2,300.00	24.09	282.93	2,177.20	167.58	-612.70	634.94	0.00	0.00	0.00
2,400.00	24.09	282.93	2,268.49	176.72	-652.48	675.76	0.00	0.00	0.00
2,500.00	24.09	282.93	2,359.78	185.85	-692.26	716.58	0.00	0.00	0.00
2,600.00	24.09	282.93	2,451.07	194.99	-732.05	757.39	0.00	0.00	0.00
2,700.00	24.09	282.93	2,542.36	204.12	-771.83	798.21	0.00	0.00	0.00
2,800.00	24.09	282.93	2,633.65	213.26	-811.62	839.02	0.00	0.00	0.00
2,900.00	24.09	282.93	2,724.94	222.39	-851.40	879.84	0.00	0.00	0.00
3,000.00	24.09	282.93	2,816.23	231.52	-891.18	920.65	0.00	0.00	0.00
3,100.00	24.09	282.93	2,907.52	240.66	-930.97	961.47	0.00	0.00	0.00
3,200.00	24.09	282.93	2,998.81	249.79	-970.75	1,002.28	0.00	0.00	0.00
3,300.00	24.09	282.93	3,090.10	258.93	-1,010.53	1,043.10	0.00	0.00	0.00
3,400.00	24.09	282.93	3,181.39	268.06	-1,050.32	1,083.91	0.00	0.00	0.00
3,500.00	24.09	282.93	3,272.68	277.19	-1,090.10	1,124.73	0.00	0.00	0.00
3,600.00	24.09	282.93	3,363.97	286.33	-1,129.88	1,165.54	0.00	0.00	0.00
3,700.00	24.09	282.93	3,455.26	295.46	-1,169.67	1,206.36	0.00	0.00	0.00
3,800.00	24.09	282.93	3,546.55	304.60	-1,209.45	1,247.17	0.00	0.00	0.00
3,900.00	24.09	282.93	3,637.84	313.73	-1,249.23	1,287.99	0.00	0.00	0.00
4,000.00	24.09	282.93	3,729.13	322.86	-1,289.02	1,328.80	0.00	0.00	0.00
4,100.00	24.09	282.93	3,820.42	332.00	-1,328.80	1,369.62	0.00	0.00	0.00
4,200.00	24.09	282.93	3,911.71	341.13	-1,368.58	1,410.43	0.00	0.00	0.00
4,300.00	24.09	282.93	4,003.00	350.27	-1,408.37	1,451.25	0.00	0.00	0.00
4,400.00	24.09	282.93	4,094.29	359.40	-1,448.15	1,492.06	0.00	0.00	0.00
4,500.00	24.09	282.93	4,185.58	368.53	-1,487.93	1,532.88	0.00	0.00	0.00
4,600.00	24.09	282.93	4,276.87	377.67	-1,527.72	1,573.70	0.00	0.00	0.00
4,617.67	24.09	282.93	4,293.00	379.28	-1,534.75	1,580.91	0.00	0.00	0.00

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Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 342-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Ohio Creek									
4,699.82	24.09	282.93	4,368.00	386.79	-1,567.43	1,614.44	0.00	0.00	0.00
Upper MVRD									
4,700.00	24.09	282.93	4,368.16	386.80	-1,567.50	1,614.51	0.00	0.00	0.00
4,800.00	24.09	282.93	4,459.45	395.94	-1,607.28	1,655.33	0.00	0.00	0.00
4,879.58	24.09	282.93	4,532.10	403.21	-1,638.95	1,687.81	0.00	0.00	0.00
PA 342-26 MVRD									
4,900.00	24.09	282.93	4,550.74	405.07	-1,647.07	1,696.14	0.00	0.00	0.00
4,963.65	24.09	282.93	4,608.85	410.88	-1,672.39	1,722.12	0.00	0.00	0.00
5,000.00	23.55	282.93	4,642.10	414.17	-1,686.70	1,736.80	1.50	-1.50	0.00
5,100.00	22.05	282.93	4,734.29	422.84	-1,724.46	1,775.54	1.50	-1.50	0.00
5,200.00	20.55	282.93	4,827.46	430.97	-1,759.85	1,811.85	1.50	-1.50	0.00
5,300.00	19.05	282.93	4,921.55	438.54	-1,792.86	1,845.71	1.50	-1.50	0.00
5,400.00	17.55	282.93	5,016.49	445.57	-1,823.46	1,877.10	1.50	-1.50	0.00
5,500.00	16.05	282.93	5,112.22	452.03	-1,851.62	1,906.00	1.50	-1.50	0.00
5,600.00	14.55	282.93	5,208.67	457.94	-1,877.33	1,932.37	1.50	-1.50	0.00
5,700.00	13.05	282.93	5,305.79	463.27	-1,900.57	1,956.22	1.50	-1.50	0.00
5,800.00	11.55	282.93	5,403.49	468.04	-1,921.32	1,977.51	1.50	-1.50	0.00
5,900.00	10.05	282.93	5,501.72	472.23	-1,939.58	1,996.24	1.50	-1.50	0.00
5,916.53	9.80	282.93	5,518.00	472.87	-1,942.36	1,999.09	1.50	-1.50	0.00
Top of Gas									
6,000.00	8.55	282.93	5,600.40	475.84	-1,955.32	2,012.39	1.50	-1.50	0.00
6,100.00	7.05	282.93	5,699.47	478.88	-1,968.54	2,025.95	1.50	-1.50	0.00
6,200.00	5.55	282.93	5,798.87	481.33	-1,979.23	2,036.92	1.50	-1.50	0.00
6,300.00	4.05	282.93	5,898.52	483.20	-1,987.38	2,045.28	1.50	-1.50	0.00
6,400.00	2.55	282.93	5,998.35	484.49	-1,992.98	2,051.02	1.50	-1.50	0.00
6,500.00	1.05	282.93	6,098.30	485.19	-1,996.03	2,054.16	1.50	-1.50	0.00
6,569.71	0.00	0.00	6,168.00	485.33	-1,996.65	2,054.79	1.50	-1.50	0.00
6,600.00	0.00	0.00	6,198.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
6,700.00	0.00	0.00	6,298.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
6,800.00	0.00	0.00	6,398.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
6,900.00	0.00	0.00	6,498.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,000.00	0.00	0.00	6,598.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,100.00	0.00	0.00	6,698.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,200.00	0.00	0.00	6,798.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,219.71	0.00	0.00	6,818.00	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
Cameo									
7,300.00	0.00	0.00	6,898.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,400.00	0.00	0.00	6,998.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,500.00	0.00	0.00	7,098.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,600.00	0.00	0.00	7,198.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,700.00	0.00	0.00	7,298.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,800.00	0.00	0.00	7,398.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
7,900.00	0.00	0.00	7,498.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
8,000.00	0.00	0.00	7,598.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
8,100.00	0.00	0.00	7,698.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
8,200.00	0.00	0.00	7,798.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
8,219.71	0.00	0.00	7,818.00	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
RLNS									
8,300.00	0.00	0.00	7,898.29	485.33	-1,996.65	2,054.79	0.00	0.00	0.00
8,369.71	0.00	0.00	7,968.00	485.33	-1,996.65	2,054.79	0.00	0.00	0.00

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Project:	Garfield County, CO NAD83	MD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 342-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
PA 342-26 PBHL - PBHL (PA 342-26)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL (PA 342-26)	0.00	0.00	0.00	-3.33	-4.56	1,615,196.47	2,308,743.38	39.4969019	-107.9498516
- plan misses target center by 5.64usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL (PA 342-26)	0.00	0.00	7,968.00	485.33	-1,996.65	1,615,738.66	2,306,765.19	39.4982433	-107.9569110
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,081.24	9 5/8" @ 1100' MD	9.62	13.50	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,617.67	4,293.00	Ohio Creek		0.00	
4,699.82	4,368.00	Upper MVRD		0.00	
5,916.53	5,518.00	Top of Gas		0.00	
7,219.71	6,818.00	Cameo		0.00	
8,219.71	7,818.00	RLNS		0.00	